

When hazardous substances enter the environment, fish, wildlife, and other natural resources can be injured. The Department of the Interior, along with State, Tribal and other Federal partners, act as “trustees” for these resources. Trustees seek to identify the natural resources injured and determine the extent of the injuries, to recover damages from those responsible, and to plan and carry out natural resource restoration activities. These efforts are possible under the Natural Resource Damage Assessment and Restoration Program, the goal of which is to restore natural resources injured by contamination. The Department, along with other trustees, is accomplishing this goal along the upper Sacramento River in northern California, bringing a cleaner, healthier environment to the people of the area.



Metam sodium spill into the Upper Sacramento River Cantara Loop. © Photo by California Department of Fish and Game.

Restoring Our Resources

California's Upper Sacramento River–Cantara Loop



The Problem

On July 14, 1991, a Southern Pacific train derailed on a stretch of track known as the “Cantara Loop” while crossing the upper Sacramento River near Mount Shasta, just north of Dunsmuir, California. Approximately 19,000 gallons of metam sodium, a chemical typically used as a soil fumigant and herbicide spilled into the Sacramento River. When metam sodium is released into the environment, it forms both liquid and gas compounds that are highly toxic to people, plants, and animals. Residents of the town of Dunsmuir were forced to evacuate. Contaminated water killed fish, other aquatic organisms, and plants. It also seeped into the soil, entering the shallow ground water aquifers surrounding the river banks. Terrestrial wildlife were affected not only by the contamination of their water supply, but also by the gases in the air. In total, air, water, soil, plants, and animals along a 45-mile stretch of the Sacramento River were exposed to metam sodium.



Trout killed by the Cantara Loop chemical spill. © Photo by California Department of Fish and Game.

Solving the Problem

The U.S. Fish and Wildlife Service (USFWS), the California Department of Fish and Game (CDFG), and other trustees, conducted a Natural Resource Damage Assessment to determine the effects of the spill on fish and wildlife resources. As a result of this assessment, a \$38 million settlement was reached with the responsible parties. A portion of this settlement money was earmarked as compensation for the injured natural resources. These funds are allocated annually through a grant program overseen by the [Cantara Trustee Council](#). Funds are provided for projects involving natural resource acquisition and protection, resource restoration and enhancement, resource recovery monitoring, and public outreach.

Restoring the Resources

More than 42 acres of mature cottonwood-willow riparian habitat and surrounding uplands along Battle Creek in Tehama County have been acquired to replace

stream resources lost during the spill. In addition, restoration projects are underway along stretches of several creeks and rivers. The Lassen Creek restoration will benefit four Goose Lake Basin fish that are species of concern. It is hoped that such restoration efforts will prevent these species from needing Endangered Species Act protection. Restoration of Spring Creek, a tributary of the Pit River, will promote recovery of the endangered Shasta crayfish by improving habitat for the species and restoring barriers that protect it from a more aggressive species, the signal crayfish.

Reaching out to the Public

The Upper Sacramento River Exchange Center was established to foster watershed stewardship and environmental education for residents and visitors to the upper Sacramento River. Public education activities provided by the Center include: interpretive field trips; volunteer river cleanups; an annual River Festival; and, public meetings on resource issues. In addition, the Center coordinates

with local schools in Dunsmuir and Mt. Shasta by developing programs that complement existing curricula.

The Dunsmuir Schools Watershed Education Project is an effort to foster natural resource stewardship in the community most severely affected by the spill. The high school teaches an interdisciplinary approach to analyzing watershed health through water quality monitoring and participation in fish surveys with the CDFG. Math classes analyze and graph the data collected, while English classes prepare reports on species affected by the chemical spill and produce year-end reports on the field studies. Elementary school classes receive training on watershed management and ecology. Subjects include: the water cycle; the effects of the spill on various animals and plants; and, the examination of animals in the field. Some classes assist with a Cantara Home Page on the Internet (<http://sisnet.ssku.k12.ca.us/~desftp/watershed.html>), while others continue long-term erosion control and land use planning projects on the school campus. Both high school and elementary students prepare

exhibits for the annual Dunsmuir River Festival.

The CDFG has received funds to provide special events and educational opportunities for residents and visitors to Siskiyou and Shasta counties and to hire staff for various education and outreach positions. In addition, funding has been provided for the development of public service announcements to keep people informed on the progress of the restoration program.

A Partnership for Success

The Cantara Loop spill was a devastating accident that caused tremendous damage to the Upper Sacramento River and the fish and wildlife that depend on it. However, the Trustee Council, a partnership of Federal and State agencies and non-governmental organizations, has been able to make strides in restoring and protecting the watershed by using funds collected in the settlement. These restoration efforts benefit not only the fish and wildlife that depend on the watershed, but also the watershed's residents and visitors. In addition, through the various educational programs that have evolved as a result of the Cantara spill, residents and visitors to the area are becoming more knowledgeable about the importance of a healthy watershed and more committed to the protection of this trust resource.

For more information, contact: The U.S. Fish and Wildlife Service, 3310 El Camino Avenue, Suite 130, Sacramento, California 95821; 916-979-2110. Also, visit the USFWS web site at <http://www.fws.gov>.

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Sacramento River at Ney Springs after completion of habitat enhancement activities.
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